

U.S. Patent Application No. 10/647,347

Attorney Docket No. 2328-050A

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-31 (Canceled).

32. (Previously Submitted) A method of manufacturing many different inductive plasma processors of the same type, each of the processors including a plasma excitation coil having plural electrically connected windings, each of the windings having a pair of excitation terminals, the windings of the coil of each processor being adapted to be driven by an excitation source arrangement so that different currents simultaneously flow through the pair of excitation terminals of each winding, the plural windings of each coil of each processor being arranged so an exterior winding of the coil is about an interior winding of the coil, the exterior winding and the interior winding being about an axis of the coil, the different processors of the same type having differing electric field and plasma density distributions from processor to processor, the method comprising for each of the inductive plasma processors:

moving the position of the exterior and interior windings relative to each other and the axis so the plasma density incident on a workpiece in a chamber of the processor has a predetermined desired relationship until tests conducted on each processor indicate optimum uniform plasma distribution is achieved in each processor.

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33. (Previously Submitted) The method of claim 32 wherein the different processors of the same type have differing azimuthal electric field distributions, and wherein the movement of the exterior and interior windings relative to each other includes turning the windings relative to each other and the axis until the tests indicate the different processors of the same type have the optimum uniform plasma distribution.

34. (Previously Submitted) The method of claim 33 wherein the windings of the coil of each processor are electrically connected in parallel.

35. (Previously Submitted) The method of claim 32 wherein the tests are conducted by simultaneously supplying electric current to the pair of excitation terminals of each winding of the coil of a particular processor.

36. (Previously Submitted) A method of controlling the plasma flux distribution on a workpiece of an inductive plasma processor including a plasma excitation coil having plural electrically connected windings, each of the windings having a pair of excitation terminals, the windings being adapted to be driven by an excitation source arrangement so that different currents simultaneously flow through the pair of excitation terminals of each winding of a coil of a particular processor, the exterior and interior windings being about an axis of the coil, the method comprising: changing the relative angular position between the exterior and interior windings of the coil so the plasma density distribution incident on the workpiece has a predetermined desired relationship; the position changing step including turning the exterior and interior windings of the coil

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relative to each other about an axis; the exterior and interior windings being turned relative to each other to assist in controlling azimuthal electric field distribution and plasma density distribution of the processor; the method being performed on several different processors of the same type having different azimuthal electric field and plasma density distributions from processor to processor, the exterior and interior windings of each particular processor being turned relative to each other until tests indicate optimum uniform plasma distribution is achieved in each processor.

37. (Previously Submitted) The method of claim 36 wherein the windings of the coil of each processor are electrically connected in parallel.

38. (Previously Submitted) The method of claim 36 wherein the tests are conducted by simultaneously supplying electric current to the pair of excitation terminals of each winding of the coil of a particular processor.

39. (Currently amended) A method of controlling the plasma flux distribution on a workpiece of an inductive plasma processor including a plasma excitation coil having plural electrically connected windings, each of the windings having a pair of excitation terminals, the windings being adapted to be driven by an excitation source arrangement so that different currents simultaneously flow through the pair of excitation terminals of each winding, the exterior and interior windings being about an axis of the coil, the method comprising: changing the relative position between the exterior and interior windings of the coil so the plasma density incident on the workpiece has a

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predetermined desired relationship; the position changing step including moving the exterior and interior windings of the ~~core~~coil relative to each; the exterior and interior windings being moved relative to each other to assist in controlling electric field distribution and plasma density distribution of the processor; the method being performed on several different processors of the same type having different electric field and plasma density distributions from processor to processor, the exterior and interior windings of each particular processor being moved relative to each other until tests indicate optimum uniform plasma distribution is achieved in each processor.

40. (New) The method of claim 39 wherein the windings of the coil of each processor are electrically connected in parallel.

41. (New) The method of claim 39 wherein the tests are conducted by simultaneously supplying electric current to the pair of excitation terminals of each winding of the coil of a particular processor.